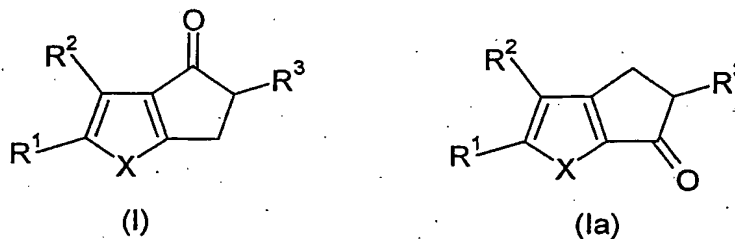
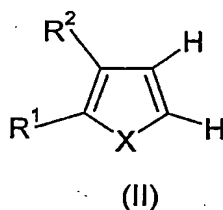


We claim:

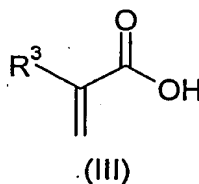
1. A process for preparing heterocyclic ketones of the formulae (I) or (Ia)



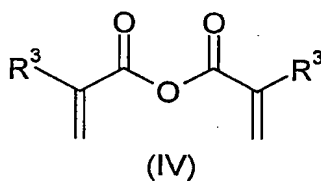
by reacting a heterocyclic compound of the formula (II)



with an α,β -unsaturated carboxylic acid of the formula (III)



or with its anhydride of the formula (IV)



which comprises performing the reaction in a liquid reaction medium which comprises at least one strong organic acid and at least one water absorbent, where the strong organic acid has a higher acid strength than the carboxylic acid of the formula (III) by adding simultaneously the heterocyclic compound of the formula (II) together with the α,β -unsaturated carboxylic acid of the formula (III) or together with its anhydride of the formula (IV) to said liquid reaction medium, and

where

- 5 R¹ is hydrogen or a C₁-C₄₀ carbon-containing group,
- R² is hydrogen or a C₁-C₄₀ carbon-containing group, or
- R¹ and R² together form a cyclic ring system,
- 10 R³ is a C₁-C₄₀ carbon-containing group and
- X is an element of the 16th group of the Periodic Table or is a divalent nitrogen
 group -(N-R⁴)-, where R⁴ is an electron-withdrawing radical which is selected from
15 the group consisting of perhalogenated C₁-C₄₀ carbon-containing radicals and
 C₁-C₄₀ organosulfonyl groups.
2. A process as claimed in claim 1, wherein X is sulfur.
3. A process as claimed in claim 1 or 2, wherein the strong organic acid is a C₁-C₈-
20 alkylsulfonic acid.
4. A process as claimed in any of claims 1 to 3, wherein the water absorbent is phosphorus
 pentoxide.
- 25 5. A process as claimed in any of claims 1 to 4, wherein at least 50% by weight of the liquid
 reaction medium consists of a mixture of methanesulfonic acid and phosphorus
 pentoxide.
- 30 6 A process as claimed in any of claims 1 to 5, wherein the molar ratio of the heterocyclic
 compound of the formula (II) to the α,β -unsaturated carboxylic acid of the formula (III) is in
 the range from 5 : 1 to 1 : 100.
- 35 7. A process as claimed in any of claims 1 to 6, wherein the mass ratio of the heterocyclic
 compound of the formula (II) to the liquid reaction medium is in the range from 1 : 2 to
 1 : 1000.
8. A process as claimed in any of claims 1 to 7, wherein the mass ratio of the water
 absorbent to the strong organic acid is in the range from 1 : 99 to 25 : 75.

9. A process as claimed in any of claims 1 to 8, wherein the reaction is carried out in the temperature range from 20 to 200°C.

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